

Payson
Municipal Airport

Chapter Two
AVIATION DEMAND FORECASTS

AVIATION DEMAND FORECASTS



Facility planning must begin with a definition of the demand that may reasonably be expected to occur at the facility over a specific period of time. In airport master planning, this involves forecasts of aviation activity indicators over a twenty-year planning period. In this master plan update, forecasts of based aircraft, based aircraft fleet mix, and annual aircraft operations will be used as the basis for facility planning.

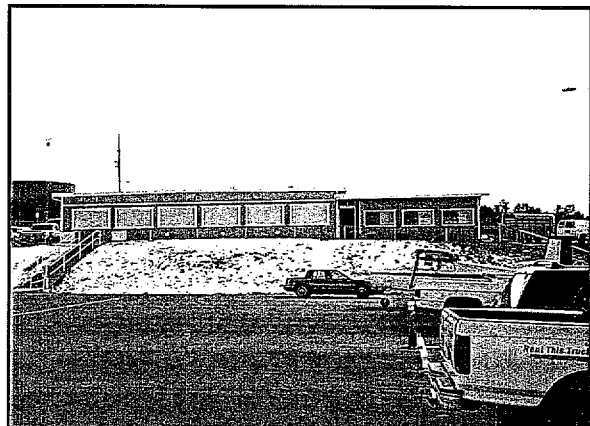
It is virtually impossible to predict with certainty year-to-year fluctuations of activity when looking twenty years into the future. Because aviation activity can be affected by many influences at the local, regional, and national level, it is important to remember that forecasts are to serve only as guidelines and planning must remain flexible enough to respond to unforeseen facility needs. This makes it important to review the airport's

activity on a regular basis to determine if changes to the guidelines are necessary.

The following forecast analysis examines recent developments, historical information, and current aviation trends to provide an updated set of based aircraft and operational projections. The intent is to permit the Town of Payson to make the planning adjustments necessary to ensure that the facility meets projected demands in an efficient and cost effective manner.

NATIONAL AVIATION TRENDS

Each year, the Federal Aviation Administration (FAA) publishes its national aviation forecast. Included in this publication are forecasts for air carriers, air taxi/commuters, general



aviation, and military activity. The forecasts are prepared to meet budget and planning needs of the constituent units of the FAA and to provide information that can be used by state and local authorities, the aviation industry, and the general public. The current edition is *FAA Aviation Forecasts-Fiscal Years 1996-2007*. The forecasts use the economic performance of the United States as an indicator of future aviation industry growth in the United States. Similar economic analyses are applied to the outlook for aviation growth in international markets.

For the U.S. aviation industry, the outlook for the next twelve years is for moderate to strong economic growth, moderately increasing fuel prices, and moderate inflation. Based on these assumptions, aviation activity by fiscal year 2007 is forecast to increase by 19.5 percent at towered airports and 26.8 percent at air route traffic control centers. The general aviation active fleet is projected to decline for the next few years then begin to rebound for a net increase of 4.9 percent. General aviation hours flown are forecast to increase by 9.9 percent during the same period.

NATIONAL GENERAL AVIATION TRENDS

The general aviation industry is an important contributor to the nation's economy. General aviation includes the production and sale of aircraft, avionics and other equipment, along with the provision of support services such as

flight schools, fixed base operators, finance and insurance. In general, general aviation has been in a state of decline for more than a decade. A number of events have factored into this extended decline in the general aviation industry. These have included the deregulation of the airline industry, increases in airspace restrictions for Visual Flight Rule (VFR) only aircraft, reductions in leisure time, and shifts in personal preferences for goods, services, and leisure time. The overriding factor, however, has been the increased cost in owning and operating a general aviation aircraft.

There are a number of reasons, however, to maintain a favorable outlook of the general aviation industry. One of the primary reasons is the passage of the General Aviation Revitalization Act of 1994. This legislation limits the liability on general aviation aircraft to 18 years from the date of manufacture. This has sparked an interest in aircraft manufacturers to renew the manufacturing of general aviation aircraft due to the reduction in product liability brought about by this legislation. The high cost of product liability insurance was a major factor in the decision to slow (or in some cases) discontinue general aviation aircraft production.

Since the enactment of this legislation in August 1994, Cessna aircraft has committed to resume the production of selected single engine piston aircraft and Piper has announced plans to increase its production level. The first new Cessna piston engine aircraft rolled off the Cessna production lines at

Independence, Kansas in November, 1996. In addition, the amateur-built aircraft market has shown steady growth over the past several years. General aviation aircraft shipments were up 12.9 percent in 1995 reversing a six-year decline in aircraft shipments. Most notable about this increase was that it occurred across all aircraft types.

Other reasons for a more favorable long range outlook for general aviation is a growing realization that the industry must "reinvent" itself. As a result, several federal, manufacturer, and industry programs have been initiated. Among these is the FAA's recent streamlining of the small aircraft certification process to include a new entry-level aircraft (Primary Category Rule) that could encourage the production of small, affordable aircraft.

Eleven general aviation organizations have formed a coalition in support of the implementation of the FAA's General Aviation Action Plan. This action plan has goals to provide for regulatory relief and reduced user costs, improved delivery of services through reduced layers of management and more communication, elimination of unneeded programs and processes, and encouragement of product innovation and competitiveness.

Manufacturer and industry programs include the "No Plane No Gain" program promoted jointly by the General Aviation Manufacturers and The National Business Aircraft Association. This program is designed to promote the use of general aviation aircraft as an essential tool of business.

Other programs are intended to promote growth in the number of new pilot starts and general flying and introduce people to general aviation. These include the Aircraft Owners and Pilots Association "Project Pilot"; the National Air Transportation Association's "Learn to Fly" program, and the Experimental Aircraft Association's "Young Eagles" program.

The most notable trend in general aviation is the continued strong use of general aviation aircraft for business and corporate uses. In 1994, the number of hours flown by the combined use categories of business and corporate flying represented 23.3 percent of total general aviation activity. In 1990, the number of hours flown by the combined use categories of business and corporate flying represented 21.8 percent of total general aviation activity.

As a result of continued strong use of general aviation aircraft for business and corporate uses, the character of the general aviation fleet has continued to change from a fleet consisting mostly of small piston powered aircraft to a fleet made up of more sophisticated turbine powered aircraft. Reflecting the increasing convenience of general aviation flying to business and their push for more sophisticated, turbine powered aircraft, FAA long-term projections show this segment of general aviation growing more rapidly than all others. FAA forecasts project the active turbine-powered fleet growing 1.5 percent annually through the year 2007. This includes the number of turboprop aircraft growing from 4,207 in 1995 to 5,000 in 2007 and

the number of turbojet aircraft increasing from 4,073 in 1995 to 4,900 in 2007.

A trend in the type of general aviation operations at FAA towered airports and the number of general aviation aircraft handled at FAA enroute traffic control has also emerged. General aviation operations at both locations have registered increases in the past two years reflecting an increased use of technologically advanced, sophisticated aircraft in adverse weather conditions. General aviation instrument operations at towered airports were up 1.9 percent in 1994 and 0.6 percent in 1995. The number of general aviation aircraft handled at en route centers was up 2.7 percent in 1994 and 3.9 percent in 1995.

Overall, the active general aviation aircraft fleet is expected to continue to decline for the short-term, followed by slow growth. The aging piston-engine portion of the active aircraft fleet is the primary reason for the short term decline in active aircraft. The average age of the active aircraft fleet is 27 years with piston aircraft accounting for most of the aging aircraft. Piston aircraft are anticipated to have a net increase of 3,300 units in the active fleet by 2007. **Exhibit 2A** depicts the FAA forecast for active general aviation aircraft in the United States.

AIRPORT SERVICE AREA

The initial step in determining aviation demand for an airport is to define its generalized service area for the various segments of aviation the airport can

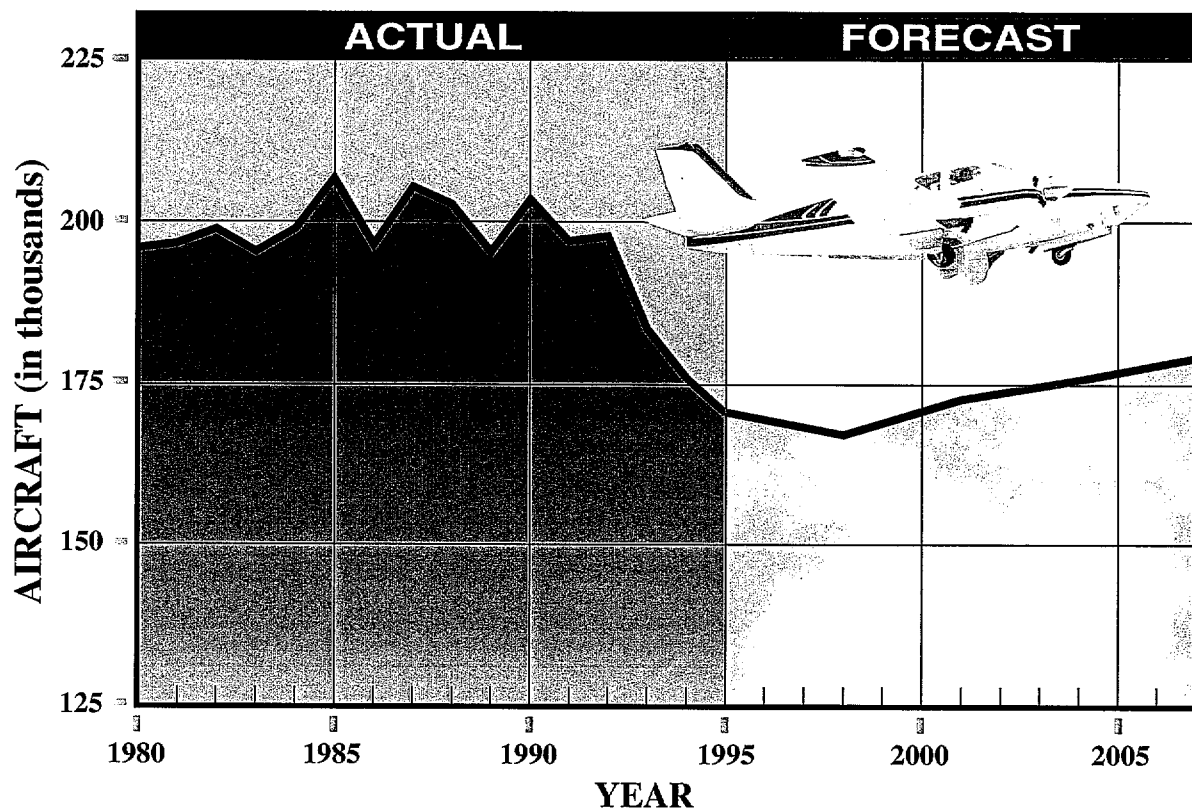
accommodate. The airport service area is determined primarily by evaluating the location of competing airports, their capabilities and services, and their relative attraction and convenience. With this information, a determination can be made as to how much aviation demand would likely be accommodated by a specific airport.

The airport service area is an area where there is a potential market for airport services. Access to general aviation airports, commercial air service, and transportation networks enter into the equation that determines the size of a service area, as well the quality of aviation facilities, distance, and other subjective criteria.

In determining the aviation demand for an airport it is necessary to identify the role of that airport. The primary role of the Payson Municipal Airport is to serve the needs of general aviation. General aviation is a term used to describe a diverse range of aviation activities which includes all segments of the aviation industry except commercial air carriers and military. General aviation is the largest component of the national aviation system and includes activities ranging from pilot training, to recreational flying, and the use of sophisticated turboprop and turbojet aircraft for business and corporate uses.

A review of nearby general aviation airports was previously completed in Chapter One. General aviation airports are generally impacted by other general aviation airports within 30 nautical miles of the airport; however, there are no public-use airports within 30

ACTIVE GENERAL AVIATION AIRCRAFT



U.S. ACTIVE GENERAL AVIATION AIRCRAFT (in thousands)

As of January 1	FIXED WING				ROTORCRAFT				
	PISTON		TURBINE		Piston	Turbine	Experimental	Other	Total
	Single Engine	Multi- Engine	Turboprop	Turbojet					
1995	123.3	15.6	4.2	4.1	1.4	3.0	12.9	6.2	170.6
1998	119.0	15.1	4.4	4.3	1.3	3.0	13.5	6.7	167.3
2001	122.6	15.5	4.6	4.5	1.2	3.0	14.1	7.0	172.5
2004	124.5	15.6	4.8	4.7	1.1	3.0	14.6	7.4	175.7
2007	126.4	15.8	5.0	4.9	1.1	3.0	15.0	7.7	178.9

Source: FAA Aviation Forecasts, Fiscal Years 1996-2007.

Notes: Detail may not add to total because of independent rounding. An active aircraft must have a current registration and it must have been flown at least one hour during the previous calendar year.



nautical miles of Payson Municipal Airport and only four public-use airports within 50 nautical miles (a new airport is being planned near Cordes Junction, approximately 40 nautical miles west). As mentioned previously, considering the considerable ground distance between these airports and Payson Municipal Airport, these airports do not significantly compete with Payson Municipal Airport for air service in northern Gila County. Therefore, Payson Municipal Airport can be considered the exclusive airport providing general aviation services in northern Gila County, southern Coconino County, and eastern Yavapai County.

POPULATION PROJECTIONS

Local population forecasts provide an indication of the potential for sustaining growth in aviation activity over the planning period. **Table 2A** summarizes historical and forecast population for the Town of Payson and Gila County. Over the past five years, the population in both the Town of Payson and Gila County has shown a steady year-to-year increase. The population in the Town of Payson has grown by 2,200 since 1991, growing at an average annual rate of 5.7 percent. Strong annual growth rates are expected for Payson for the next few years, then gradually slowing by the year 2015 when the Town's population is expected to reach 19,000. The local Chamber of Commerce estimates the local trade population at 24,000.

The population in Gila County has increased by 3,000 since 1991, growing at an average annual rate of 1.7 percent. The Gila County population is projected to grow to 59,775 by the year 2020, an average annual growth rate of 1.2 percent. The Town of Payson has the largest population of all communities in Gila County.

TABLE 2A
Historical and Forecast Population
Town of Payson, Gila County

Year	Town of Payson ¹	Gila County ²
Historical		
1991	8,790	41,050
1992	9,150	41,700
1993	9,614	42,400
1994	10,218	43,350
1995	11,004	44,075
Forecast		
2000	13,277	47,900
2005	15,464	50,275
2010	17,438	53,750
2015	19,116	56,725
2020	20,500 ³	59,775
¹ <i>Public Safety Master Plan, Payson, Arizona, Draft Report, September, 1996</i> ² <i>Arizona Department of Economic Security</i> ³ <i>Extrapolation by Coffman Associates</i>		

GENERAL AVIATION FORECASTS

To determine the types and sizes of facilities that should be planned to accommodate general aviation activity,

certain elements of this activity must be forecast. Indicators of general aviation demand include: based aircraft, the based aircraft fleet mix, general aviation operations, and peak activity. The remainder of this chapter will examine historical trends with regard to these areas of general aviation and project future demand for these segments of general aviation activity at the airport.

BASED AIRCRAFT

The number of based aircraft is the most basic indicator of general aviation demand at an airport. By first developing a forecast of based aircraft, the growth of aviation activities at the airport can be projected.

The preparation of based aircraft forecasts for Payson Municipal Airport was initiated with a review of historical data regarding based aircraft at the airport. Historical based aircraft records are maintained by the State and FAA. Based aircraft totals for the State are derived from aircraft registrations, while based aircraft totals for the FAA are derived from an annual inspection of the airport which verifies the number of aircraft based at the airport. At Payson Municipal Airport, the number of based aircraft exceeds the number of aircraft registered with the State. This discrepancy in based aircraft totals is associated with aircraft owner's who maintain tiedown or hangar space at the airport but have their aircraft registered in another area. For purposes of determining future facility needs and deriving based aircraft

trends, this master plan will utilize historical based aircraft totals provided by the FAA as these more closely approximate actual historical based aircraft at the airport.

A number of forecasting techniques have been utilized to analyze future based aircraft demand at the airport. First, a series of trend line and regression analyses were performed. Trend line analyses pertain to projecting future activity based on previous trends. Regression analyses measure the correlation between two or more separate sets of historical data. The measure of the correlation between sets of historical data is identified by the "correlation coefficient" (R value). The higher the R value, the more the separate sets of historical data are related in some manner. The lower the R value, the greater the chance that the sets of historical data are not related. Normally, regression analyses with an R value below 0.95 are not used in projections as they may not provide a reasonable assurance of correlation between sets of historical data.

Historical data related to regional and national general aviation aircraft and local and regional socioeconomic factors were utilized in the regression analyses performed for this study. **Table 2B** summarizes the best results of trend line and regression analyses performed. As shown in the table, none of the analyses provided a R value near 0.95. While these analyses should not be used to provide viable forecasts, they do provide a reasonable indication of the future based aircraft totals and can be used for comparative purposes. The

poor results of the trendline and regression analyses can be attributed to the static based aircraft totals since 1990.

A second forecasting technique involved market share analyses. For these analyses, the airport's share of regional and national general aviation aircraft totals were examined. Historical and forecast data for aircraft in the FAA Western-Pacific Region and entire U.S. Active General Aviation Aircraft fleet was gathered for use in the market share analyses. As mentioned previously,

national forecasts for general aviation aircraft are for a continuing decline in the number of active aircraft with a slight increase near the end of the next decade. Since 1990, based aircraft at Payson have remained steady at approximately 54 aircraft. Nationally, and within the FAA Western-Pacific Region active aircraft numbers have declined. For these reasons the market share analyses using FAA Western-Pacific Region and U.S. Active Aircraft fleet were dropped from consideration as they did not provide reliable forecasts.

TABLE 2B Based Aircraft Forecast Summary Payson Municipal Airport						
	1996	2000	2005	2010	2015	2020
Trend Line Analysis Approach 1980-1996 (R=.88) 1986-1996 (R=.85)		64 69	73 82	83 95	92 108	102 121
Linear Regression Analysis Approach Payson Population (R=.87) Gila County Population (R=.85)		70 76	81 91	92 104	101 118	107 132
Market Share Analysis Approach U.S. Active General Aviation Aircraft FAA Western-Pacific Region Aircraft		51 54	53 55	55 56	57 58	59 59
Aircraft Per Capita Approach Payson Population Gila County Population		65 58	76 61	85 65	93 69	101 73
Other Resources 1996 FAA Terminal Area Forecast 1995 State Aviation Needs Study 1989 Master Plan		54 24 71	54 25 81	54 27 93	N/A 28 N/A	N/A N/A N/A
Planning Forecast	54	62	71	81	90	100

A final forecasting technique examined historic per capita based aircraft totals of the Town of Payson and Gila County.

Historical per capita based aircraft totals were then compared to projected Gila County and Town of Payson

population. This technique resulted in based aircraft growing at rates similar to the Gila County and Town of Payson population.

The 1996 *FAA Terminal Area Forecasts (TAF)*, 1995 *State Aviation Needs Study (SANS)*, and 1989 *Master Plan* based aircraft projections for the airport have been examined for comparative purposes. The 1996 *FAA TAF* uses 1995 base year data and projects no growth in based aircraft at the airport. The 1995 *SANS*, which utilized registered aircraft records, projected based aircraft growing at an average annual rate of 0.9 percent, growing from 23 in 1995 to 28 in 2015. The 1989 *Master Plan* used 1988 base year data and projected based aircraft growing to 93 by 2010.

Exhibit 2B presents the based aircraft planning forecast and "forecast envelope". The "forecast envelope" defines a range within which actual based aircraft totals should be found. The planning forecast is influenced by the strong historical and forecast population growth in the Town of Payson and historical based aircraft growth trends. Based aircraft have doubled at the airport since 1980. The planning forecast projects based aircraft doubling again over the next twenty-four years, growing at an average annual rate of 2.6 percent. The Payson population is projected to grow at an average annual rate of 2.7 percent. The continued local economic and population growth supports the long-range potential for based aircraft growth at the airport.

Future based aircraft totals may be affected by development within the adjacent Mazatzal Mountain Air Park and proposed Payson Skyranch residential developments. Owner's of homesites will have access to the airport and can base aircraft at their homes. Additionally, a 14-unit T-hangar facility is currently under construction in Sky Park Industrial.

Fleet Mix

Knowing the aircraft fleet mix expected to utilize the airport is necessary to properly plan the facilities that will best serve not only the level of activity but also the type of activities occurring at the airport. The December 1996 total of 54 based aircraft was comprised entirely of single engine aircraft.

The forecast mix of based aircraft was determined by examining existing and forecast U.S. general aviation fleet trends. The *FAA Aviation Forecasts Fiscal Years 1996-2007* was consulted for the U.S. general aviation fleet mix trends and considered in the fleet mix projections. The trend in general aviation is toward a greater percentage of larger, more sophisticated turboprop and jet aircraft, as well as helicopters, as part of the national fleet and a reduction in the number of single-engine piston aircraft, while the number of multi-engine piston aircraft essentially remains static through the planning period after declining slightly in the early portion of the planning period.

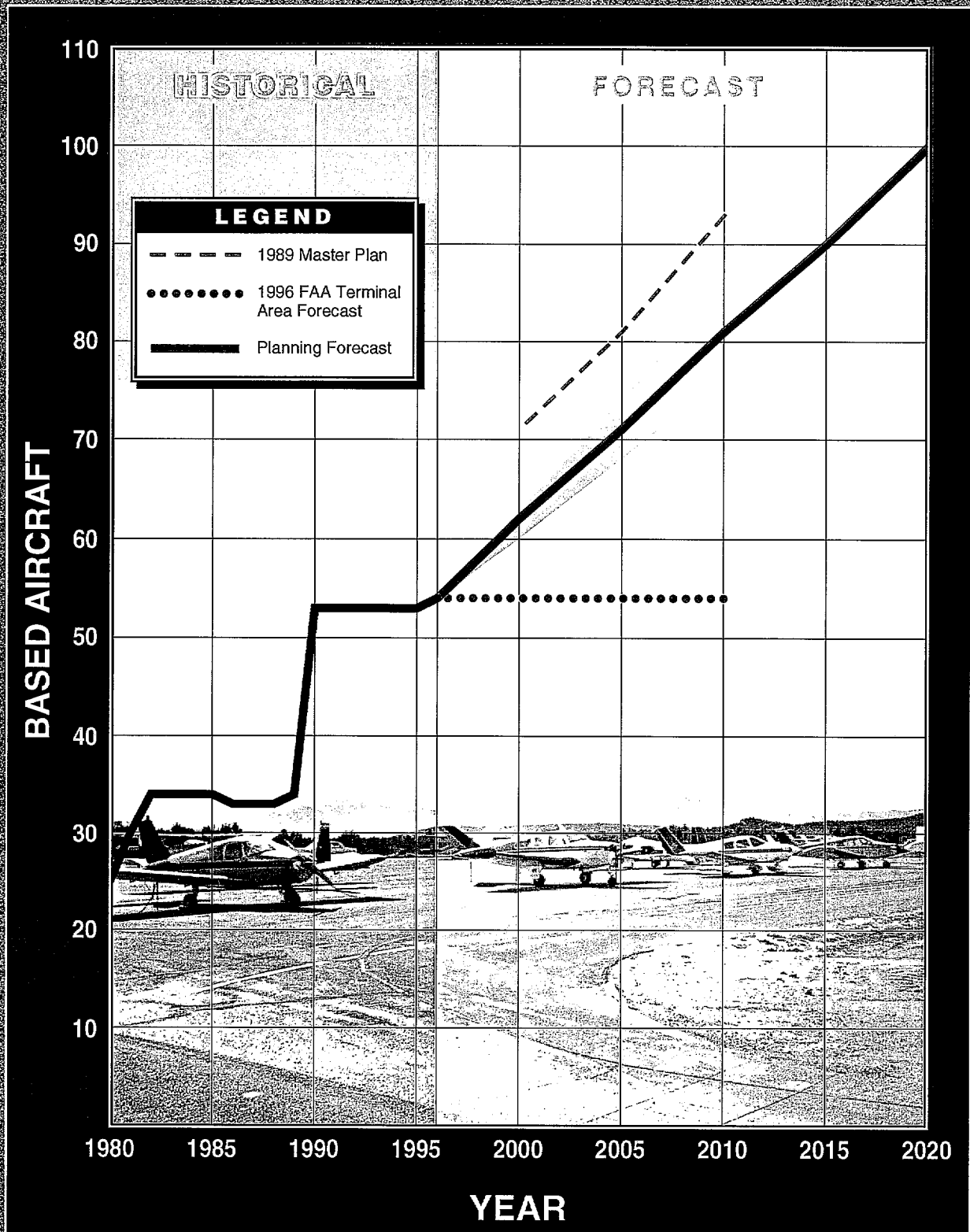


Exhibit 2B
BASED AIRCRAFT FORECASTS

The fleet composition of based aircraft at Payson Municipal Airport is expected to remain heavily in single-engine piston aircraft, although there is expected to be an increasing percentage of multi-engine, turbo prop, jet, and helicopters in the future mix, consistent with national trends. **Table 2C** summarizes the based aircraft fleet mix projections for the airport.

ANNUAL OPERATIONS

There are two types of general aviation operations at an airport: local and

itinerant. A local operation is a take-off or landing performed by an aircraft that operates within sight of the airport, or which executes simulated approaches or touch-and-go operations at the airport. Itinerant operations are those performed by aircraft with a specific origin or destination away from the airport. Generally, local operations are characterized by training operations. Typically, itinerant operations increase with business and industry use since business aircraft are used primarily to carry people from one location to another.

TABLE 2C
Projected Based Aircraft Fleet Mix
Payson Municipal Airport

Year	Total Based Aircraft	Single Engine	Multi Engine	Turbo Prop	Jet	Helicopter
<i>Historical</i>						
1996	54	54	0	0	0	0
<i>Forecast</i>						
2000	62	60	2	0	0	0
2005	71	66	3	1	0	1
2010	81	72	5	2	1	1
2015	90	77	7	3	1	2
2020	100	82	9	4	2	3

Due to the absence of an air traffic control tower at the airport, aircraft operations have not been regularly counted. Instead, only general estimates of annual observations are available prior to 1994. Since 1994, aircraft operations at the airport have been regularly counted and recorded by the airport fixed base operator (FBO). According to their records, aircraft operations have increased each year

since 1994, growing from 14,900 in 1994, to 19,437 in 1995, to 21,311 in 1996. **Table 2D** summarizes historical annual operations estimates. While a slight decline in annual operations levels is evidenced in the table, this may be the result of the difference in collection methods of annual operational levels. Historical operations provided by the FAA are estimates of annual operations while 1994 through 1996

operations are cumulative totals of actual activity.

For purposes of this forecasting effort, military operations are included within

the general aviation forecasts due to their small number. Military operations consist mostly of itinerant helicopter operations.

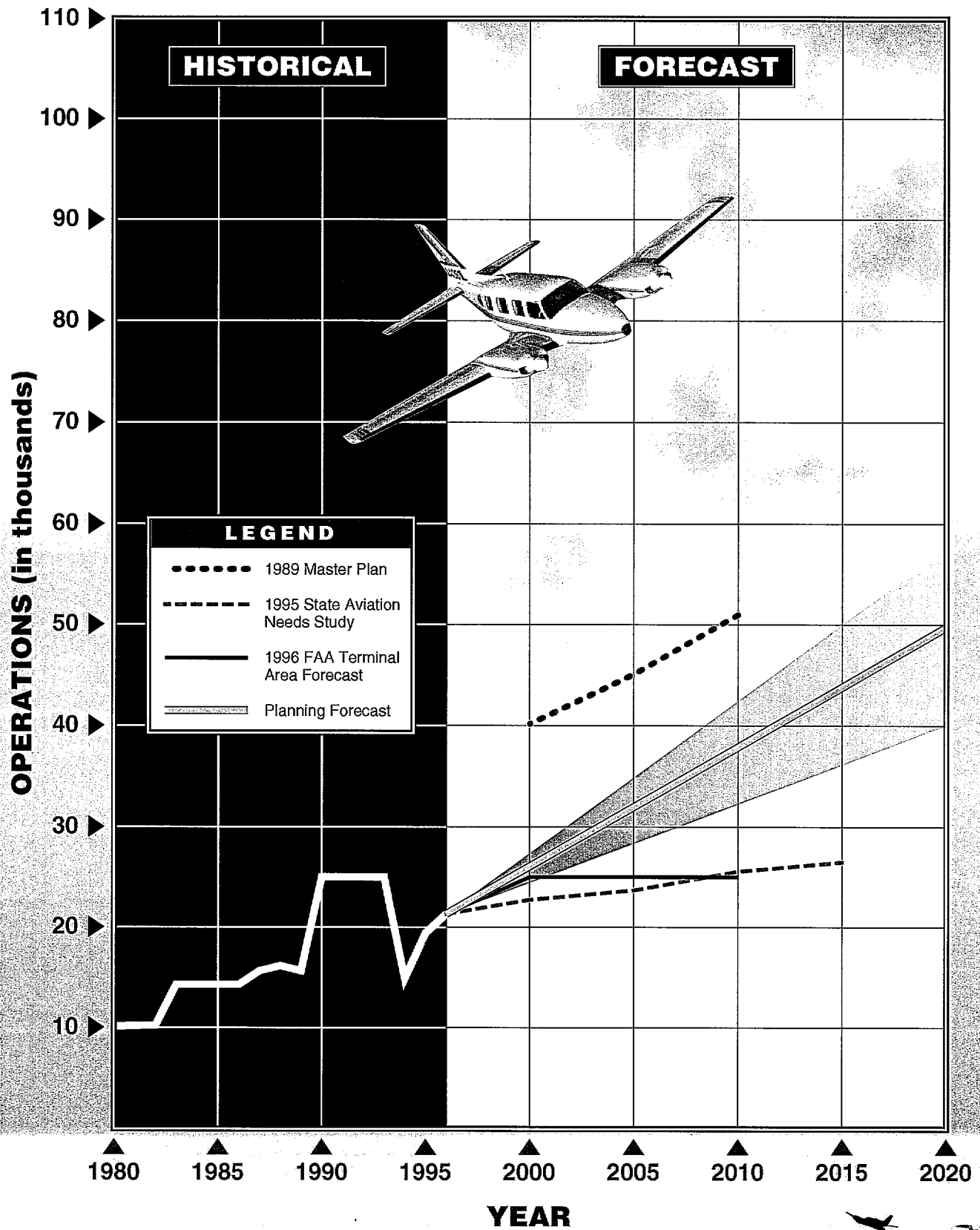
TABLE 2D Historical Annual Operations and Operations Per Based Aircraft Payson Municipal Airport			
Year	Based Aircraft	Total Annual Operations	Operations Per Based Aircraft
1980	25	10,120 (est.)	405
1985	34	14,250 (est.)	419
1990	53	25,000 (est.)	472
1994	53	14,900	281
1995	53	19,437	366
1996	54	21,311	395

Similar to based aircraft, regression and trend line analyses did not provide reasonable correlations for use in developing reliable operations forecasts. Therefore, projections of annual operations at Payson Municipal Airport have been prepared by examining the number of operations per based aircraft. Historically, operations per based aircraft increased as operational and based aircraft totals increased. When compared with historical estimates, the number of operations per based aircraft has declined.

For forecasting purposes, two forecasts of operations per based aircraft have been developed. First, a constant, or static level of 400 operations per based aircraft was applied to forecast based aircraft. This results in an operational level of 40,000 in 2020. As previously mentioned, aircraft locating to the Mazatzal Mountain Airpark, proposed Payson Sky ranch, and Sky Park

Industrial have the potential of contributing to additional airfield activity. A total of 111 homesites are planned for each of the residential developments: Mazatzal Mountain Air Park and Payson Sky ranch. A 14-unit T-hangar facility is currently under construction in the Sky Park Industrial Park. An increasing operation per based aircraft forecast has been developed to account for this additional activity.

Exhibit 2C presents the planning forecast and "forecast envelope". The additional activity resulting from aircraft locating within the adjacent residential air parks and industrial park will likely contribute to an increase in the number of annual operations at the airport. The planning forecast accounts for additional activity resulting from aircraft locating within the adjacent residential air parks and industrial park while also accounting for historical operational trends which



have seen a doubling of aircraft operations over the past 15 years. The planning forecast projects annual operations growing at an average annual rate of 3.6 percent.

Previous forecasts have been examined for comparative purposes and are summarized in **Table 2E** and on **Exhibit 2C**. The *1996 FAA TAF*

projects no growth in annual operations at the airport. The *1995 SANS* projects annual operations growing at an average annual rate of 1.0 percent. Considering the forecast growth in based aircraft and aircraft off-airport, these forecasts are considerably low and not representative of expected growth. The *1989 Master Plan* projected annual operations growing to 50,960 by 2010.

TABLE 2E Annual Operations Forecast Summary Payson Municipal Airport					
	2000	2005	2010	2015	2020
Constant Percentage of Operations per Based Aircraft	24,800	28,400	32,400	36,000	40,000
Increasing Percentage of Operations per Based Aircraft	26,700	32,700	39,700	46,800	55,000
<i>1996 FAA Terminal Area Forecast</i>	25,000	25,000	25,000	N/A	N/A
<i>1995 State Aviation Needs Study</i>	22,723	23,670	25,673	26,510	N/A
<i>1989 Master Plan</i>	40,180	45,080	50,960	N/A	N/A
Planning Forecast	26,000	31,200	37,300	43,200	50,000

As reported by the FAA, and observed by the Fixed Base Operator (FBO), itinerant operations have accounted for a larger portion of total annual operations than local operations. This trend is likely to continue considering the low levels of training activity associated with the airport. As the local population grows and services at the airport increase (such as flight training), it is likely that local operations will increase in number and as a percentage of total operations. Forecasts of local and itinerant operations have been summarized in the summary table at the end of this chapter.

PEAKING CHARACTERISTICS

Many airport facility needs are related to the levels of activity during peak periods. The periods used in developing facility requirements for this study are as follows:

- ◆ **Peak Month** - The calendar month when peak aircraft operations occur.
- ◆ **Design Day** - The average day in the peak month. Normally this indicator is easily derived by dividing the peak month operations by the number of days in a month.

- ♦ **Busy Day** - The busy day of a typical week in the peak month. This descriptor is used primarily to determine apron space requirements.
- ♦ **Design Hour** - The peak hour within the design day. This descriptor is used primarily in airfield demand/capacity analyses, and in determining terminal building and access road requirements.

It is important to note that only the peak month is an absolute peak within a given year. All other peak periods will be exceeded at various times during the year. However, they do represent reasonable planning standards that can be applied without overbuilding or being too restrictive.

For the airport, peak period forecasts were determined using actual data and trends experienced at similar airports across the county. Typically, the peak month for activity at general aviation airports approximates 10-12 percent of the airport's annual operations. At the airport, the peak month was verified by examining 100LL fuel sales for 1996. The peak month for 100LL fuel sales in 1996 was August and accounted for 11.5 percent of total 100LL fuel sales for 1996. Peak month operations forecasts for the airport were developed assuming this percentage. Design day operations were calculated by dividing the peak month by 30. The forecast of busy day operations at the airport was calculated as 1.25 times design day activity. Design hour operations were calculated as 16.5 percent of design day operations. **Table 2F** summarizes the peak activity forecasts for the airport.

TABLE 2F
Peak Period Forecasts
Payson Municipal Airport

	1996	2000	2005	2010	2015	2020
Annual Operations	21,311	26,000	31,200	37,300	43,200	50,000
Peak Month	2,400	3,000	3,600	4,300	5,000	5,800
Design Day	82	100	120	143	167	193
Busy Day	103	125	150	178	208	241
Design Hour	14	16	20	24	28	32

COMMERCIAL AIR SERVICE POTENTIAL

Payson Municipal Airport has never been served by scheduled airline service. The existing runway length, planned GPS instrument approach, growing local population and economy, large trade area (which is estimated by

the local Chamber of Commerce to encompass over 24,000 people), and distance from Phoenix-Sky Harbor International Airport have the potential to attract air service. Considering the proximity of Payson to Phoenix, any potential airline service would likely be commuter/regional type airline service

serving Phoenix-Sky Harbor International Airport.

An airline's decision to enter a market is purely a business decision based on the potential passenger market. Without a history of air service at Payson Municipal Airport it is difficult to estimate the air passenger market in Payson. However, examining similar airports and communities with existing scheduled airline service could provide an indication of the potential passenger market in Payson.

Communities near Payson with regional airline service include Prescott and Show Low. (Note: Air service at Show Low was discontinued in May 1997 when the airline participating in the local subsidy eliminated service to Show Low.) **Table 2G** compares 1995 population to enplanements in these communities. (An enplanement is a person boarding a scheduled airline.)

Prescott is included in the federal Essential Air Service (EAS) program. Under this program, a subsidy is paid to the airline serving Prescott to guarantee regular service and reduce ticket prices. This likely increases the number of annual airline enplanements in Prescott. The ratio of enplanements to population is likely to be smaller in Payson than in Show Low and Prescott since Payson is closer to Phoenix than Show Low and Prescott is part of the EAS program. Assuming a ratio of enplanements to population of .25 equates to an existing air passenger market of approximately 2,700 annual passengers. Applying this factor to forecast population provides an indication of the future air passenger market in Payson. **Table 2H** compares forecast Payson population and an enplanements factor to derive the potential air passenger market for Payson.

TABLE 2G
Enplanements Per Capita
Prescott and Show Low, Arizona

	1995 Population ¹	1995 Enplanements ²	Ratio of Enplanements to Population
Prescott	30,270	10,343	.34
Show Low	5,830	3,151	.54

¹ Department of Economic Security

² FAA DOT/TSC CY1995 ACAIS Database

Attracting scheduled air service to Payson would require a considerable commitment on the part of the Town of Payson. Necessary airport improvements would include a terminal facility,

terminal apron, and auto parking. In addition, the Town of Payson would likely need to provide marketing and/or subsidies to attract scheduled air service to Payson.

The most important factors in creating and sustaining scheduled air service is the frequency of service and air fares. Competitive air fares would attract travelers who might otherwise choose to drive to Phoenix-Sky Harbor International Airport which can offer jet aircraft service, lower fares, and frequency of service. Should the

community be able to attract scheduled air service, it is likely that a number of potential local air passengers would still choose to drive to Phoenix rather than flying directly from Payson. Current improvements along Highway 87 may reduce the existing one and half hour travel time from Payson to Phoenix.

TABLE 2H
Potential Air Passengers
Payson Municipal Airport

Year	Forecast Population ¹	Ratio of Enplanements to Population	Potential Air Passengers
2000	13,277	.25	3,300
2005	15,464	.25	3,900
2010	17,438	.25	4,400
2015	19,116	.25	4,800
2020 ²	20,500	.25	5,100

¹ *Public Safety Master Plan, Payson, Arizona, Draft Report, September, 1996*

² 2020 Population Extrapolated by Coffman Associates

FORECAST SUMMARY

This chapter has outlined the various aviation demand levels anticipated over the planning period. Overall, aviation activity at the airport has not followed the national trends. Based aircraft totals have remained constant while nationally total active aircraft continue to decline. While based aircraft totals are forecast to increase, they may be affected by development in the Mazatzal Mountain Air Park, proposed Payson Skyranch, and Sky Park Industrial. Development within these areas, however, will contribute to strong growth in annual operations. Long-

term growth at the airport will be sustained by a growing local economy and population. Overall, aviation activity at the airport is forecast to exceed regional and national growth rates.

The next step in the master plan is to assess the capacity of existing facilities to accommodate forecast demand and determine which facilities will need to be improved to meet these demands. This will be examined in the next chapter -- Chapter 3, Facility Needs Evaluation. **Table 2J** presents a summary of the aviation forecasts developed for the airport.

TABLE 2J**Aviation Forecast Summary****Payson Municipal Airport**

	1996	2000	2005	2010	2015	2020
Annual Operations						
Itinerant Operations	19,211	23,100	27,500	32,500	37,200	42,500
Local Operations	<u>2,100</u>	<u>2,900</u>	<u>3,700</u>	<u>4,800</u>	<u>6,000</u>	<u>7,500</u>
Total Annual Operations ¹	21,311	26,000	31,200	37,300	43,200	50,000
Based Aircraft	54	62	71	81	90	100

¹ Includes Military Operations